

This listing of claims will replace all prior versions,
and listings, of claims in the application:

1 Claims 1-9 (canceled)

1 Claim 10 (original): Apparatus for measuring the
2 propagation time (T_p) of an ultrasound signal, the apparatus
3 comprising:

4 means for forming an excitation signal;

5 an emitter transducer (1, 2) connected to said means
6 for forming an excitation signal;

7 a receiver transducer (2, 1) to transform the
8 ultrasound signal into a receive signal; and

9 comparator means connected to said receiver transducer
10 to compare the amplitude of the receive signal with a
11 trigger threshold voltage and to generate a signal
12 representative of oscillations of said receive signal;
13 the apparatus being characterized in that it further
14 comprises:

15 means for measuring a fixed time ($HB1$, $HB2$) connected
16 to said means for forming an excitation signal in order to
17 measure a fixed time (T_0) from the instant at which the
18 emitter transducer is excited;

19 means for determining an i^{th} oscillation ($HB3$, $HB4$),
20 which means are connected to said comparator means, to
21 count the number of oscillations in the receive signal and
22 to detect the i^{th} oscillation; and

23 means ($HB5$) for measuring a variable time (T_{iEX})
24 between the end of measuring the fixed time (T_0) and
25 detecting the i^{th} oscillation.

1 Claim 11 (original): Apparatus for measuring the
2 propagating time (T_p) of an ultrasound signal according to
3 claim 10, characterized in that the means for measuring a
4 fixed time (T_0) comprise a counter (HB1) and a decoder
5 (HB2).

1 Claim 12 (original): Apparatus for measuring the
2 propagating time (T_p) of an ultrasound sound according to
3 claim 10 or claim 11, characterized in that the means for
4 determining the i^{th} oscillation comprise a counter (HB3) and
5 a decoder (HB4).

1 Claim 13 (original): A device for measuring the
2 propagation time T_p of an ultrasound signal according to any
3 one of claims 10 to 12, characterized in that the means for
4 measuring the variable time (T_{IEX}) comprise a time expander
5 circuit (HB5).